**Diseases**

**Citrus greening disease**
This disease causes sectorial yellowing of leaves. Fruits are small and lopsided. Tree may blossom out of season. It is transmitted by citrus psyllid.

**Control**
- Control psyllids with insecticides.
- Plant seedlings from certified nurseries.
- Rogue infected trees and disinfect budding tools from one seedling to the next.

**Citrus gummosis**
Bark rots on the roots or the trunk and the branches. In early stages of infections gum oozes from the infected parts hence the name gummosis. Leaves start yellowing and the twigs dieback and the tree eventually dries up and die if untreated.

**Control**
- Surgically remove the bark or burn it with blue flame from a propane torch.
- Fertilize and irrigate the treated trees.
- Use tolerant rootstocks - Cleopatra mandarin.
- Weed from the tree trunk outwards.
- Avoid planting on heavy or waterlogged soils.
- Plant seedling with the bud union at least 6cm above the ground level.
Introduction
Citrus yields are often low and fruits are of poor quality due to pests and diseases. Information on common pests and diseases and their management is important for improved yields.

Pests
Mediterranean fruit fly
These are brightly coloured flies that lay their eggs on citrus fruits. The fruits develop spots and change colour to orange or yellow when still immature and eventually drop from the tree.

Control
• Spray alternative rows with systemic insecticide and insecticide baits.
• Systemic insecticides in honey or fermented juice are also effective.

Citrus woolly aphid
These are small insects covered with curly white wool hence the name woolly aphid.

Control
• Ring-band the tree trunk with insecticide to discourage climbing attendant ants.
• Spot spray the heavily infested trees or alternate rows paying attention to the underside of the leaves.
• Prune off heavily infested branches.

Citrus black fly
These appear as colonies of black small insects on the underside of leaves. A thin film of wax covers them.

Control
• A parasitic wasp normally keeps these pests in check.

In severe infestations sprays of contact or systemic insecticides are effective.

Citrus soft scales
These are small motionless insects mostly found on the young and succulent tissue on leaves, stems and also on fruits.

Control
• Avoid dusty conditions by siting orchards away from roads.
• Plant wind breaks and in heavy infestations spray with acaricides.

Bud mites
They attack the young buds and shoots resulting in whitish to silverish small spots on leaves causing severe malformation of leaves and spread to new growth.

Control
• Spray with mineral oil.

Russet mites
These attack the fruits resulting in silverfish colour